

1 REMARKS

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3 A review of the claims indicates that:

4 Claims 2-3, 5-8, 10-19, 21-27, 29-31, 34, 36, and 38 remain in their
5 original form.

6 Claims 1, 4, 9, 20, 28, 32-33, 35, and 37 are currently amended.

7 No claims are currently cancelled.

8

9 Claims 9, 20, and 33 are rejected under 35 U.S.C. §112 first paragraph as
10 failing to comply with the enablement requirement.

11 Claims 1-38 are rejected under 35 U.S.C. §103(a) as being unpatentable
12 over U.S. Patent No. 5,822,781 to Wells *et al.* (hereinafter “Wells”), in view of
13 U.S. Patent No. 5,630,093 to Holzhammer *et al.* (hereinafter “Holzhammer”).

14 Claims 1-38 remain in this application.

15 In view of the following remarks, Applicant respectfully requests
16 reconsideration of the rejected claims and allowance of the subject application.

1 **Telephone Conversation with Examiner**

2 Applicant wishes to thank the Examiner for the telephonic conversations on
3 May 12, 2005 and August 1, 2005. Applicant particularly appreciates the
4 Examiner's preliminary indication of the novel and nonobvious nature of the
5 limitation of storing a logical sector address at the physical sector address of the
6 flash memory medium assigned to the logical sector address (such that, for
7 example, an assignment map showing the assignment of a physical sector address
8 to a logical sector address may be quickly reestablished after, for example, a
9 power outage).

10 **Correction of Objected to Drawings**

11 The drawings of the present application are amended to comply with 37
12 CFR 1.84(u)(1) and 37 CFR 1.121(d), as set out on Page 2 of the Office Action.
13 Copies of the amended drawings are attached to this paper.

14 **Update of Dependency information**

15 In order to comply with the requirements set out on Page 3 of the Office
16 Action, paragraph 1 of subject application (the section entitled "Related
17 Application") is amended to reflect that application number 10/087,590 -- from
18 which the subject application claims priority -- has issued as U.S. Patent No.
19 6,901,499.

1
2 **Claim Rejections under 35 U.S.C. §112, first paragraph**

3 **Claims 9, 20 and 33**

4 Claims 9, 20, and 33 are rejected under 35 U.S.C §112, first paragraph as
5 failing to comply with the enablement requirement. Applicant has obviated this
6 rejection by amending claims 9, 20, and 33 to include language suggested by the
7 Examiner on page 4 of the Office Action.

8
9 **Claim Rejections under 35 U.S.C. §103**

10 **Claims 1-38**

11 Claims 1-38 are rejected as being unpatentable over Wells in view of
12 Holzhammer. Applicant respectfully traverses the rejection.

13
14 **Amended claim 1 recites:**

15 A flash driver system, comprising:

16 a free sector manager, configured to
17 determine a next free physical sector address on a media and
18 assign the address to a logical sector address of a write
19 request received from a file system;

20 a table, configured to store a map
21 showing the assignment of the physical sector address to the
22 logical sector address; and

23 a flash medium logic, configured to write
24 the data to the next free physical sector indicated by the free
25 sector manager and store the logical sector address directly
 with the data on the flash memory medium.

26
27 Neither Wells nor Holzhammer, alone or in combination, discloses,
28 teaches, or suggests the flash driver system recited in claim 1. In particular,

1 neither Wells nor Holzhammer discloses, teaches, or suggests “a free sector
2 manager, configured to determine a next free physical sector address on a media
3 and assign the address to a logical sector address of a write request received from
4 a file system” or “a flash medium logic, configured to write the data to the next
5 free physical sector indicated by the free sector manager and store the logical
6 sector address directly with the data on the flash memory medium”.

7 For example, Wells discloses a solid state memory disk that stores data on a
8 sector basis (please see Abstract). According to the teachings of Wells, once a
9 disk receives a command to write data, a microprocessor must undertake an
10 “involved process” to allocate sufficient memory within a flash array to store the
11 sector of data. (Column 14, lines 6-12 and Column 15, lines 15-19). This
12 involved process includes the “complex and critical” tasks of allocating memory
13 space, selecting an appropriate memory location to prevent memory degradation,
14 and making four major decisions –(i) are there sufficient FLASH memory reserves
15 to allow the write, (ii) is there enough free memory in the block to which the
16 current process was last allocated to store the current sector, (iii) is there a block
17 with enough free FLASH memory to store the sector data, and (iv) is that block an
18 appropriate block in which to store the sector? (Column 15, lines 50-62). The full
19 method for allocating memory space for a write under Wells is shown in Figs. 10A
20 and 10B, and encompasses more than 30 steps. Thus, once a write request is
21 received, Wells teaches that an involved and time exhausting process must be
22 undertaken to find appropriate free memory space in which to store the data to be
23 written.

1 This is markedly different than the flash driver system cited in claim 1 in
2 which a free sector manager determines a next free physical sector address on a
3 media and assigns the address to a logical sector address of a write request
4 received from a file system. Thus, once a write request is received, a flash
5 memory logic can write data to the next free physical sector indicated by the free
6 sector manager without having to pause the write process in order to proceed
7 through the “involved”, “complex” and time-consuming process of allocating
8 memory space as taught by Wells.

9 In addition, as admitted by the Office, Wells makes no mention of an
10 ability to re-establish an erased mapping of physical to logical addresses. (Office
11 Action, page 4). In this regard the Office relies on Holzhammer, which discloses a
12 non-volatile semiconductor memory that is erased in blocks. (Holzhammer
13 Abstract). Under Holzhammer, a compressed version of a cluster mapping table in
14 which logical addresses are mapped to physical addresses is stored in RAM of a
15 personal computer system. (Column 21, lines 29-32; Column 15, lines 4-7; and
16 Fig 12). Accordingly, in the event of a power failure, the cluster mapping table
17 taught by Holzhammer will be permanently lost. Essentially, Holzhammer
18 represents the very prior art that Applicant sought to overcome. Moreover,
19 Holzhammer makes no mention of storing the logical sector address directly with
20 the data on the flash memory medium.

21 In contrast, by using the flash driver system as recited in claim 1, each
22 logical sector address is saved directly with the data on the flash memory medium.
23 Thus, after a power failure, by scanning the flash memory medium, the logical
24
25

1 sector addresses may be read, and an in-memory lookup table may be easily
2 updated.

3 Thus, Wells and Holzhammer, both singly and in combination, fail to
4 disclose, teach, or suggest the elements recited in claim 1.

5 The Office argues that the claimed flash driver system of claim 1 is
6 disclosed in Wells (Column 4, lines 10 et seq.; Table 84; and Column 13, lines 64
7 et seq.) and Holzhammer (Figure 12). (Office Action, page 5). Applicant
8 respectfully disagrees. As noted above, Wells teaches undertaking an “involved”,
9 “complex” and time-consuming process of allocating free memory space each
10 time a write request is received before data can be written. In contrast, once a
11 write request is received by the flash driver system recited in claim 1, the flash
12 memory logic can write data to the next free physical sector indicated by the free
13 sector manager. Thus, the flash driver system recited in claim 1 can react to write
14 requests more quickly and efficiently than could a device using the teachings of
15 Wells.

16 Holzhammer fails to provide any missing teachings. As discussed above,
17 the compressed version of a cluster mapping table shown in Fig. 12 of
18 Holzhammer is stored in RAM of a personal computer system. Thus, in the event
19 that power to the personal computer is cut off, the cluster mapping table will be
20 permanently lost. In contrast, the flash driver system recited in claim 1 includes a
21 flash memory logic configured to store the logical sector address directly with the
22 data on the flash memory medium. Thus, after a power failure situation, an in-
23 memory lookup table may be easily reestablished by scanning the flash memory
24 medium and reading the logical sector addresses from the flash memory medium.

1 Accordingly, the combination of Wells and Holzhammer fails to disclose,
2 teach, or suggest the flash driver system of claim 1. Applicant respectfully
3 requests that the §103 rejection of claim 1 be withdrawn.

4 **Dependent claims 2-3** are allowable at the least by virtue of their
5 dependency on base claim 1, as well as for the additional elements they contain.
6 Applicants respectfully request that the §103(a) rejection of claims 2-3 be
7 withdrawn.

8

9 **Amended claim 4** recites:

10 A flash driver system, comprising:

11 a free sector manager, configured to maintain a
12 list of at least one free physical sector address available on a
13 flash memory medium;

14 a flash abstraction logic, configured to query the
15 free sector manager for the next free physical sector address
16 and link the physical sector address to a logical sector address
received from a file system; and

17 a table, configured to store the physical sector
18 address to logical sector address linking performed by the
19 flash abstraction logic.

20 Neither Wells nor Holzhammer discloses, teaches, or suggests the flash
21 driver system recited in claim 4. As discussed in more detail above in conjunction
22 with claim 1, the combination of Wells and Holzhammer fails to disclose, teach, or
23 suggest “a free sector manager, configured to maintain a list of at least one free
24 physical sector address available on a flash memory medium” and “a flash
25 abstraction logic, configured to query the free sector manager for the next free
physical sector address and link the physical sector address to a logical sector
address received from a file system” as recited in claim 4.

1 Instead, as discussed in more detail above, according to the teachings of
2 Wells, once a disk receives a write command, a microprocessor must undertake an
3 “involved process” to allocate sufficient memory within a flash array to store the
4 sector of data. (Column 14, lines 6-12 and Column 15, lines 15-19). This
5 involved process encompasses more than 30 steps (as shown in Figures 10A and
6 10B) and includes the “complex and critical” tasks of allocating memory space,
7 selecting an appropriate memory location to prevent memory degradation, and
8 making four major decisions. (Column 15, lines 50-62). Thus, under Wells,
9 before each write request can be completed an involved and time exhausting
10 process must be undertaken to find appropriate free memory space into which data
11 can be written.

12 This is markedly different than the flash driver system recited in claim 4 in
13 which a free sector manager is configured to maintain a list of at least one free
14 physical sector address available on a flash memory medium. Using such a free
15 sector manager, once a write request is received, for example, a flash abstraction
16 logic may query the free sector manager for the next free physical sector address
17 and link the physical sector address to a logical sector address received from a file
18 system. In this way, the logical sector address and the physical sector address may
19 be linked immediately, without having to go through the complex and time
20 consuming memory allocation process taught in Wells.

21 As noted above, Holzhammer fails to offer any missing teachings. Thus,
22 Wells and Holzhammer, both singly and in combination, fail to disclose, teach, or
23 suggest the elements recited in claim 4.

1 In rejecting claim 4, the Office makes the same references to Wells and
2 Holzhammer, as were made in its rejection of claim 1. However, as discussed
3 above, the Office's assessment of Wells and Holzhammer is faulty.

4 The flash driver system recited in claim 4, includes "a free sector manager,
5 configured to maintain a list of at least one free physical sector address available
6 on a flash memory medium" and "a flash abstraction logic, configured to query the
7 free sector manager for the next free physical sector address and link the physical
8 sector address to a logical sector address received from a file system". Thus when
9 a need arises in which a logical sector address must be linked to a physical sector
10 address, the flash abstraction logic recited in claim 4 need not proceed through the
11 complex and time consuming process taught by Wells. Instead, the flash
12 abstraction logic needs only to query the free sector manager for a next free
13 physical sector address. Thus, the flash driver system recited in claim 4 is able to
14 link a logical sector address to a physical sector address more quickly, and in a
15 much less complex fashion, that would be possible using the teachings of Wells.
16 Moreover, as discussed in more detail above in conjunction with claim 1,
17 Holzhammer does not remedy the failings of Wells.

18 Accordingly, the combination of Wells and Holzhammer fails to disclose,
19 teach, or suggest the flash driver system of claim 4. Applicant respectfully
20 requests that the §103 rejection of claim 4 be withdrawn.

21 **Dependent claims 5-8** are allowable at the least by virtue of their
22 dependency on base claim 4, as well as for the additional elements they contain.
23 Applicants respectfully request that the §103(a) rejection of claims 5-8 be
24 withdrawn.

25

1 **Amended claim 9 recites:**

2 A memory device comprising:

3 a free sector manager to determine a next
4 free physical sector address on a flash memory medium and
5 to assign the physical sector address to a logical sector
6 address;

7 an assignment map to store data
8 corresponding to the physical sector address to the logical
9 sector address assignment,

10 wherein the next free physical sector
11 accepts data without requiring to be erased in direct response
12 to the issuance of a write request associated with said data;
13 and

14 wherein the logical sector address
15 associated with the stored data is stored at the physical sector
16 address of the flash memory medium assigned to the logical
17 sector address.

18 Neither Wells nor Holzhammer discloses, teaches, or suggests the memory
19 device recited in claim 9. As discussed in more detail above in conjunction with
20 claims 1 and 4, the combination of Wells and Holzhammer fails to disclose, teach,
21 or suggest “a free sector manager to determine a next free physical sector address
22 on a flash memory medium and to assign the physical sector address to a logical
23 sector address”, “wherein the next free physical sector accepts data without
24 requiring to be erased in direct response to the issuance of a write request
25 associated with said data” and “wherein the logical sector address associated with
 the stored data is stored at the physical sector address of the flash memory medium
 assigned to the logical sector address” as recited in claim 9.

26 Instead, under Wells once a disk receives a write command, a
27 microprocessor must undertake an “involved process” to allocate sufficient
28 memory within a flash array to store the sector of data. (Column 14, lines 6-12

1 and Column 15, lines 15-19). This involved process encompasses more than 30
2 steps (as shown in Figures 10A and 10B) and includes the “complex and critical”
3 tasks of allocating memory space, selecting an appropriate memory location to
4 prevent memory degradation, and making four major decisions. (Column 15, lines
5 50-62). Thus, under Wells, before each write request can be completed an
6 involved and time exhausting process must be undertaken to find appropriate free
7 memory space into which data may be written.

8 This is markedly different than the memory device recited in claim 9 in
9 which a next free physical sector accepts data without requiring to be erased in
10 direct response to the issuance of a write request associated with said data. This
11 results because the free sector manager determines a next free physical sector
12 address on a flash memory medium and assigns the physical sector address to a
13 logical sector address. In this way, a physical sector address may be assigned to a
14 logical sector address immediately, without having to go through the complex and
15 time consuming memory allocation process taught in Wells.

16 As noted above, Holzhammer fails to offer any missing teachings. Instead,
17 under Holzhammer, a compressed version of a cluster mapping table in which
18 logical addresses are mapped to physical addresses is stored in RAM of a personal
19 computer system. (Column 21, lines 29-32; Column 15, lines 4-7; and Fig 12).
20 Accordingly, in the event of a power failure the cluster mapping table will be
21 permanently lost. Essentially, Holzhammer represents the very prior art that
22 Applicant sought to overcome. Moreover, Holzhammer makes no mention of a
23 logical sector address associated with the stored data being stored at the physical
24 sector address of the flash memory medium assigned to the logical sector address.

1 In contrast, by using the flash driver system as recited in claim 9, each
2 logical sector address is saved directly with the data with which it is associated at
3 the physical address on the flash memory medium. Thus, after a power failure
4 situation, an in-memory lookup table may be quickly and easily reestablished by
5 scanning each physical address of the flash memory medium from which a
6 corresponding logical sector address may be read.

7 Accordingly, Wells and Holzhammer, both singly and in combination, fail
8 to disclose, teach, or suggest the elements recited in claim 9.

9 In rejecting claim 9, the Office makes the same references to Wells and
10 Holzhammer, as were made in its rejections of claims 1 and 4. However, as
11 discussed above, the Office's assessment of Wells and Holzhammer is faulty.

12 The memory device recited in claim 9, includes "a free sector manager to
13 determine a next free physical sector address on a flash memory medium and to
14 assign the physical sector address to a logical sector address", "wherein the next
15 free physical sector accepts data without requiring to be erased in direct response
16 to the issuance of a write request associated with said data". Thus when a need
17 arises in which a physical sector address must be assigned to a logical sector
18 address, the memory device recited in claim 9 need not proceed through the
19 complex and time consuming process taught by Wells. Instead, the physical sector
20 address determined by the free sector manager can accept data without requiring to
21 be erased in direct response to the issuance of a write request associated with said
22 data. Thus, the memory device recited in claim 9 is able to facilitate the
23 acceptance of data into a free physical sector more quickly, and in a much less

1 complex fashion that would be possible using the teachings of Wells and
2 Holzhammer.

3 Moreover, the memory device recited in claim 9 recites “the logical sector
4 address associated with the stored data is stored at the physical sector address of
5 the flash memory medium assigned to the logical sector address”. Thus, after a
6 power failure situation, by scanning the flash memory medium, the logical sector
7 addresses may be read from their corresponding physical sector addresses, and an
8 in-memory lookup table may be reestablished accordingly.

9 In contrast, according to Holzhammer, a compressed version of a cluster
10 mapping table is stored in RAM of a personal computer system. Thus, in the
11 event that power to the personal computer is cut off, the cluster mapping table will
12 be permanently lost. This essentially represents the same prior art that Applicant
13 sought to overcome.

14 Accordingly, the combination of Wells and Holzhammer fails to disclose,
15 teach, or suggest the memory device of claim 9. Applicant respectfully requests
16 that the §103 rejection of claim 9 be withdrawn.

17 **Dependent claims 10-19** are allowable at the least by virtue of their
18 dependency on base claim 9, as well as for the additional elements they contain.
19 Applicants respectfully request that the §103(a) rejection of claims 10-19 be
20 withdrawn.

21
22 **Amended claim 20** recites:

23 A method comprising:
24 determining a next free physical sector
25 address on a flash memory medium;

1 assigning the physical sector address to a
logical sector address; and

2 generating an assignment map of data
corresponding to the physical sector address to the logical
sector address assignment,

3 wherein the next free physical sector
accepts data without requiring to be erased in direct response
to the issuance of a write request associated with said data;
and

4 wherein the logical sector address is
5 stored at the physical sector address of the flash memory
6 medium assigned to the logical sector address.

7
8 Neither Wells nor Holzhammer discloses, teaches, or suggests the method
9 recited in claim 20. As discussed in more detail above in conjunction with claims
10 1,4 and 9 above, the combination of Wells and Holzhammer fails to disclose,
11 teach, or suggest “determining a next free physical sector address on a flash
12 memory medium”, “wherein the next free physical sector accepts data without
13 requiring to be erased in direct response to the issuance of a write request
14 associated with said data” and “wherein the logical sector address is stored at the
15 physical sector address of the flash memory medium assigned to the logical sector
16 address” as recited in claim 20.

17 Instead, under Wells once a disk receives a write command, a
18 microprocessor must undertake an “involved process” encompasses more than 30
19 steps to allocate sufficient memory within a flash array to store the sector of data.
20 (Column 14, lines 6-12; Column 15, lines 15-19; and Figures 10A and 10B). This
21 is markedly different than the method recited in claim 20, in which a next free
22 physical sector accepts data without requiring to be erased in direct response to the
23 issuance of a write request associated with said data. This results because a next

1 free physical sector address on the flash memory medium has already been
2 determined.

3 Also, as noted above, Holzhammer fails to offer any missing teachings.
4 Under Holzhammer, a compressed version of a cluster mapping table in which
5 logical addresses are mapped to physical addresses is stored in RAM of a personal
6 computer system -- essentially representing the very prior art that Applicant
7 sought to overcome.

8 In contrast, by using the method recited in claim 20, the logical sector
9 address is stored at the physical sector address of the flash memory medium
10 assigned to the logical sector address. Thus, after a power failure situation, an in-
11 memory lookup table may be quickly and easily reestablished by scanning each
12 physical address of the flash memory medium from which a corresponding logical
13 sector address may be read.

14 Thus, Wells and Holzhammer, both singly and in combination, fail to
15 disclose, teach, or suggest the elements recited in claim 20.

16 In rejecting claim 20, the Office makes the same references to Wells and
17 Holzhammer, as were made in its rejections of claims 1, 4 and 9 above. However,
18 as discussed above, the Office's assessment of Wells and Holzhammer is faulty.

19 The method recited in claim 20, includes "determining a next free physical
20 sector address on a flash memory medium", "wherein the next free physical sector
21 accepts data without requiring to be erased in direct response to the issuance of a
22 write request associated with said data". Thus when a need arises in which data
23 must be written to a physical sector address, the method recited in claim 20 need
24 not proceed through the complex and time consuming process taught by Wells.

1 Instead, the physical sector address is already determined and ready to accept data
2 without needing to be erased in direct response to the issuance of a write request
3 associated with said data. Thus, the method recited in claim 20 is able to facilitate
4 the acceptance of data into a free physical sector more quickly, and in a much less
5 complex fashion than would be possible using the teachings of Wells and
6 Holzhammer.

7 Moreover, the method of claim 20 recites “the logical sector address is
8 stored at the physical sector address of the flash memory medium assigned to the
9 logical sector address”. Thus, after a power failure situation, by scanning the flash
10 memory medium, logical sector addresses may be read from their corresponding
11 physical sector addresses, and an in-memory lookup table may be quickly and
12 easily reestablished.

13 In contrast, according to Holzhammer a compressed version of a cluster
14 mapping table is stored in RAM of a personal computer system. Thus, in the
15 event that power to the personal computer is cut off, the cluster mapping table will
16 be permanently lost. This essentially represents the same prior art that Applicant
17 sought to overcome.

18 Accordingly, the combination of Wells and Holzhammer fails to disclose,
19 teach, or suggest the method of claim 20. Applicant respectfully requests that the
20 §103 rejection of claim 20 be withdrawn.

21 **Dependent claims 21-31** are allowable at the least by virtue of their
22 dependency on base claim 20, as well as for the additional elements they contain.
23 For example, **amended claim 28** recites “maintaining a write pointer indicating
24 the next free physical sector address on the flash memory medium”. Such a write

1 pointer enables the method recited in claim 28 to immediately assign a physical
2 sector address to a logical sector address, and enable the next free physical sector
3 to accept data without requiring the free physical sector to be erased in direct
4 response to the issuance of a write request associated with said data. In this
5 manner a data may be written to a physical sector without needing to pause in
6 order to undertake the complex and time consuming memory allocation process
7 taught by Wells.

8 Dependant **claim 29** recites, in pertinent part, “scanning one or more
9 sectors of the flash memory medium for the logical sector address; noting the
10 physical sector address from which the logical sector address is stored; and
11 reestablishing the assignment map in the event the assignment map is erased.”
12 Similarly, dependant **claim 30** recites, in pertinent part, scanning one or more
13 blocks of the flash memory medium for the logical sector address; noting the
14 physical sector address from which the logical sector address is stored; and
15 reestablishing the assignment map in the event the assignment map is erased.
16 Thus, in both claims 29 and 30, an assignment map may be reestablished after an
17 event such as a power outage, by simply scanning the flash memory medium.
18 Such an action would yield no such useful results under the teachings found in
19 Holzhammer and Wells above, because neither reference teaches saving logical
20 sector address information at the physical sector address.

21 Applicants respectfully request that the §103(a) rejection of claims 21-31
22 be withdrawn.

1 **Amended claim 32 recites:**

2 An apparatus comprising:
3 means for determining a next free
4 physical sector address on a flash memory medium;
5 means for assigning the physical sector
6 address to a logical sector address;
7 means for storing the logical sector
8 address at the physical sector address of the flash memory
9 medium assigned to the logical sector address; and
10 means for generating an assignment map
11 of data corresponding to the physical sector address to the
12 logical sector address assignment.

13 Neither Wells nor Holzhammer discloses, teaches, or suggests the
14 apparatus recited in claim 32. As discussed in more detail above in conjunction
15 with claims 1,4, 9 and 20 above, the combination of Wells and Holzhammer fails
16 to disclose, teach, or suggest “means for storing the logical sector address at the
17 physical sector address of the flash memory medium assigned to the logical sector
18 address” as recited in claim 32.

19 Instead, under Holzhammer, a compressed version of a cluster mapping
20 table in which logical addresses are mapped to physical addresses is stored in
21 RAM of a personal computer system -- essentially representing the very prior art
22 that Applicant sought to overcome. Wells adds no missing teachings.

23 In contrast, by using the apparatus recited in claim 32, the logical sector
24 address is stored at the physical sector address of the flash memory medium
25 assigned to the logical sector address. Thus, after a power failure situation, an in-
 memory lookup table may be quickly and easily reestablished by scanning each

1 physical address of the flash memory medium from which a corresponding logical
2 sector address may be read.

3 Thus, Wells and Holzhammer, both singly and in combination, fail to
4 disclose, teach, or suggest the elements recited in claim 32.

5 In rejecting claim 32, the Office makes the same references to Wells and
6 Holzhammer, as were made in its rejections of claims 1, 4, 9 and 20 above.
7 However, as discussed above, the Office's assessment of Wells and Holzhammer
8 is faulty.

9 The apparatus recited in claim 32, includes "means for storing the logical
10 sector address at the physical sector address of the flash memory medium assigned
11 to the logical sector address". Thus, after a power failure situation, an in-memory
12 lookup table may be quickly and easily reestablished by scanning each physical
13 address of the flash memory medium from which a corresponding logical sector
14 address may be read.

15 In contrast, according to Holzhammer a compressed version of a cluster
16 mapping table is stored in RAM of a personal computer system. Accordingly, in
17 the event that power to the personal computer is cut off, the cluster mapping table
18 will be permanently lost. Wells provides no missing teachings.

19 Consequently, the combination of Wells and Holzhammer fails to disclose,
20 teach, or suggest the apparatus of claim 32. Applicant respectfully requests that
21 the §103 rejection of claim 32 be withdrawn.

22 **Dependent claims 33-38** are allowable at the least by virtue of their
23 dependency on base claim 32, as well as for the additional elements they contain.
24 For example, **amended claim 37** includes "means for maintaining a write pointer

25

1 indicating the next free physical sector address on the flash memory medium".
2 Such a means enables the apparatus recited in claim 37 to immediately assign a
3 physical sector address to a logical sector address. In this manner data may be
4 written to a physical sector without pausing to undertake the complex and time
5 consuming memory allocation process taught by Wells. Applicants respectfully
6 request that the §103(a) rejection of claims 33-38 be withdrawn.

7

8 **Conclusion**

9 The Applicant submits that all of the claims are in condition for allowance
10 and respectfully requests that a Notice of Allowability be issued. If any issue
11 remains unresolved that would prevent allowance of this case, the Examiner is
12 requested to contact the undersigned attorney to resolve the issue.

13

14 Respectfully Submitted,

15

16 Dated: Aug 19, 2005

17 By:



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